



Summary of Investigation
For
Cano Coatings Ltd., Calgary AB

Subject: Surface Burning Characteristics of 3/8 inch Thick FlameX OSB
Reference: SV19074 / 11CA47042

October 6, 2011 Revised October 13, 2011

The following is a summary of the test results obtained on mineral and fibre board designated by Cano Coatings Ltd. as "3/8 inch Thick FlameX OSB" under Project 11CA47042. The tests were conducted at ULC's test facility in Toronto in accordance with the Standard, CAN/ULC-S102-10, *Standard Method of Test for Surface Burning Characteristics of Building Materials and Assemblies*, 7th Edition, and completed on October 4, 2011.

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The sole purpose of this investigation was to provide fire test data for the mineral and fibre board submitted and tested in accordance with the requirements of CAN/ULC-S102-10. This data should not be considered representative of test results for other mineral and fibre board in the absence of testing the mineral and fibre board in accordance with CAN/ULC-S102-10.

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Sincerely,

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Reviewed by:

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SAMPLE DESCRIPTION AND PREPARATION

At the request of Cano Coatings Ltd., the product designated "3/8 inch Thick FlameX OSB" was selected at random from Davidson Enman's Calgary lumber yard by a representative of ULC and submitted in ready-to-test form. The product was an oriented strand board (OSB) with a salmon-coloured film, which read "Fire Boss by Flame X Distributed by Taiga", laminated to the rough surface. Pictures of the product are shown on pages 6 and 7. Three panels measuring 2440 mm long by 535 mm wide with an average thickness of 10.80 mm were butted end-to-end to create a 7320 mm long test sample. Three test samples were prepared and conditioned to constant mass at a temperature of $23 \pm 3^{\circ}\text{C}$ and a relative humidity of $50 \pm 5\%$ prior to the test. The moisture content of the panels was not determined.

Due to the rigidity of the test samples, supplementary means of support was not required. The test samples were installed on the ceiling of the tunnel furnace with the rough, "Fire Boss" surface faced down. A 350 mm long by 560 mm wide by 1.6 mm thick, uncoated, steel plate was placed on the sample mounting ledge in front of and under the sample at the fire end of the tunnel furnace "upstream" from the gas burners to complete the 7620 mm chamber length. An airtight water seal was maintained around the furnace lid during the test.

TEST METHOD

The tests were conducted in accordance with the Standard CAN/ULC-S102-10, *Standard Method of Test for Surface Burning Characteristics of Building Materials and Assemblies*, 7th Edition.

This method defines the relative surface burning characteristics under specific test conditions. Although the procedure is applicable to materials, products and assemblies used in building construction for development of comparative surface spread of flame data, test results may not reflect the relative surface burning characteristics of tested materials under all building fire conditions. Test results relate only to the items tested.

RESULTS*Observations*

During the tests the "Fire Boss" facing blistered and delaminated from the OSB substrate exposing the OSB to the pilot flame. Near the end of the tests the first 1.5 m of the OSB substrate collapsed and fell to the floor of the tunnel furnace. Additional observations of the burning characteristics are provided in the table below. No other significant observations were made.

Test No.	Time of Ignition [min:s]	Maximum Flame Front Travel [m (ft)]	Time of Max. Flame Front Travel [min:s]	Maximum Smoke Obscuration [%]	Time of Max. Smoke Obscuration [min:s]
1	0:33	5.9 (19.5)	3:13	44.1	9:34
2	0:35	5.9 (19.5)	3:32	37.4	1:55
3	0:32	5.9 (19.5)	2:46	40.8	1:50

Surface Burning Characteristics

At the request of Cano Coatings, only the rough "Fire Boss" side was evaluated. The surface burning characteristics of the smooth surface was not evaluated. A summary of test results is tabulated below. Graphical plots of flame spread and light transmission data are attached. The test results relate only to the actual samples tested.

Test No.	Sample Description	Calculated Values	
		Flame Spread Value (FSV)	Smoke Developed Value (SDV)
1	3/8 inch Thick FlameX OSB -- Rough "Fire Boss" Side Exposed	162.7	78.3
2	3/8 inch Thick FlameX OSB -- Rough "Fire Boss" Side Exposed	144.8	60.9
3	3/8 inch Thick FlameX OSB -- Rough "Fire Boss" Side Exposed	153.4	77.3

The surface burning characteristics of the "3/8 inch Thick FlameX OSB" described herein warrants the assignment of the following rating or classification in comparison to untreated red oak as 100 and inorganic reinforced cement board as 0.

Material Details	Rating or Classification	
	Flame Spread Rating (FSR)	Smoke Developed Classification (SDC)
3/8 inch Thick FlameX OSB -- Rough "Fire Boss" Side Exposed	155	70